



TWIGA CHEMICAL INDUSTRIES LTD

TOMATO SPRAY PROGRAMME

Reliability & Value



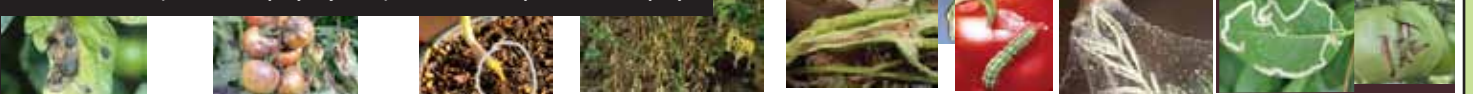
CROP GROWTH STAGE	TARGET PEST/DISEASE	PRODUCT FOR CONTROL	ACTIVE INGREDIENT	DOSAGE		PHI DAYS	REMARKS
				PER 20L	PER Ha		
Before sowing Nursery	Fusarium wilt	Nemasol	Metham sodium	2L	650-900L	28	Drench planting beds with nemasol at 1Lper 10M ² and cover with polythene for 2-4 weeks. Nemasol effectively controls weeds, nematodes and soil borne fungi.
	Damping off in the Nursery	Twigalaxyl	Metalaxyl + Mancozeb	50g	2.5kg	7	The diseases is soil borne, sprays with Twigalaxyl; a highly systemic fungicide with protective and curative attributes which effectively controls the disease
	Nutrition	Rosazol P	N:P:K 10:50:10+TE	100g	2.5kg	-	Rosazol P has high phosphorus content it is important for root development
	Whiteflies, aphids and caterpillars	Twiga ace Duduthrin	Acetamiprid Lambdacyhalothrin	8ml 50ml	250ml 500ml	7 3	Pests transmit TMV and leaf curl virus. Twiga ace effectively controls them. Duduthrin is a fast-acting synthetic pyrethroid insecticide with a knock-down effect which controls an extremely wide range of pests.
Transplanting	Transplanting shock	Codamin Radicular	NPK, Potassium phosphite + Amino Acids	30ml	1 L	-	Presence of amino acids stimulates root formation. Potassium phosphite protects new roots from fungi attack.
	Cutworms	Duduthrin 1.75EC	Lambdacyhalothrin	50ml	300ml	3	Cutworms are normally active at night. Drench Duduthrin in the evening after transplanting around the seedling base.
	Nutrition	Rosazol P	N:P:K 10:50:10+TE	100g	2.5kg	-	Rosazol P has high phosphorus content which is important for root development
Vegetative stage	Early blight	Milthane super Vitra	Mancozeb Copper Hydroxide	50g 50g	2.5kg 2.5kg	14	Heavy rains and high humidity favour disease spread. Milthane is contact and protective while Twigalaxyl is systemic curative and preventive. Alternate the two fungicides Copper disrupts the enzyme system of the pathogenic organisms. Routine spray with Vitra protects the crop
		Twigalaxyl	Metalaxyl + Mancozeb	50-100g	2.5kg	7	
	Aphids, thrips and caterpillars	Duduthrin 1.75EC	Lambdacyhalothrin	50ml	300ml	3	Pests transmit tomato mosaic virus and tomato leaf curl virus, duduthrin has a quick knockdown effect on these pests
		Katrin	Deltamethrin	10-15ml	500ml	1	Katrin is a synthetic pyrethroid with contact and stomach action which controls a wide range of insects / PHI -1 day
	Whiteflies, thrips, aphids and leafminers (<i>Tuta absoluta</i>)	Twiga ace	Acetamiprid	8ml	250ml	7	Twiga ace is broad spectrum and has excellent systemic and translaminar properties which ensures rainfastness and longer residual activity when sprayed.
		Twigamectin	Abamectin	10ml	500ml	7	Twigamectin has translaminar activity with long lasting control against leafminer (<i>Tuta absoluta</i>) and spidermites
	Nutrition	Rosazol N	N:P:K 30:10:10+TE	100g	2.5kg	-	Highly soluble well balanced foliar fertilizer to provide the crop with N:P:K + trace elements important for vigorous vegetative growth, development and production of the crop
Vigo		Plant based biostimulant	40ml	1L	-	Enhances Vigorous crop growth	
Bacterial wilt and bacterial canker	Vitra	Copper Hydroxide	50g	2.5kg	-	Apply prior to onset of the disease as a preventive spray; Uproot and burn infected plants. Apply crop rotation and use of certified seeds as these diseases are seed borne. Best results are obtained before disease is established; avoid spraying at flowering as most crops are sensitive.	
Powdery Mildew	Flower abortion and fruit drop	Microthiol special	Sulphur	50g	2-4kg	-	Boron promotes flowering, prevents flower abortion and opens up plant system for proper calcium uptake
		Vigo	Plant based biostimulant	30ml	1L	-	Enhances early and improved flowering.
Flowering stage	Late blight	Milthane super	Mancozeb	50g	2.5kg	14	Heavy rains and high humidity favor disease spread. Milthane is contact and protective while Twigalaxyl is systemic curative and preventive. Alternate the two fungicides
		Twigalaxyl	Metalaxyl + Mancozeb	50-100g	2.5kg	7	
	Thrips	Actellic 25 EC	Pirimiphos -methyl	30ml	2L	-	Actellic 25EC has contact, ingestion and fumigant actions making it effective against thrips.
		Duduthrin 1.75EC	Lambdacyhalothrin	50ml	300ml	3	Duduthrin is a fast-acting synthetic pyrethroid insecticide with a knock-down effect which controls an extremely wide range of insect pests.
	Spidermites and leafminers (<i>Tuta absoluta</i>)	Twiga ace	Acetamiprid	8ml	250ml	7	Twiga ace is broad spectrum and has excellent systemic and translaminar properties
		Twigamectin	Abamectin	10ml	0.5L	7	Twigamectin kills all motile stages of spidermites and is highly effective against leafminers
	Ortus	Fenpyroximate	20ml	0.75ml	1	Effective against all stages of mites. Has a short Pre-Harvest Interval (1 day).	
Nutrition	Rosazol K	N:P:K 12:12:36	100g	2.5-5kg	-		
Fruit expansion stage	Late blight	Milthane super	Mancozeb	50g	2.5kg	14	Heavy rains and high humidity favor disease spread. Milthane is contact and protective while Twigalaxyl is systemic curative and preventive. Alternate the two fungicides
		Twigalaxyl	Metalaxyl + Mancozeb	50-100g	2.5kg	7	
	Bacterial infections	Vitra	Copper hydroxide	50g	2-4kg	1	Routine sprays with Vitra protects the crop against bacterial infection Copper disrupts the enzyme activity of pathogens
		Rosazol E	N:P:K 20:20:20	100g	2.5-5kg	-	Ensures greener foliage, big and uniform size fruits.
Ripening/	Nutrition	Codasal Plus	Calcium liquid complex	20ml	2.5L	-	Controls blossom end rot and fruit drops
		Twigamectin	Abamectin	10ml	0.5L	7	Twigamectin kills all motile stages of spidermites and is highly effective against leafminers (<i>Tuta absoluta</i>)
	Ortus	Fenpyroximate	20ml	0.75ml	1	Effective against all stages of mites. Has a short Pre-Harvest Interval (1 day).	
Whiteflies, thrips, aphids and American bollworms	Nutrition	Rosazol K	N:P:K 12:12:36	1000g	2.5 5kg	-	Ensures uniform and excellent ripening of fruits
		Katrin	Deltamethrin	10-15ml	500ml	1	Katrin is a synthetic pyrethroid with contact and stomach action which controls a wide range of insects. It has a short pre harvest interval (1 day)

CONTACT:

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NOTE: AGRAL 90 (surfactant/spray adjuvant) should be incorporated in all sprays



Early blight Late blight Damping off Fusarium wilt Bacterial Canker Caterpillar Red spidermites Leafminer (*Tuta absoluta*)